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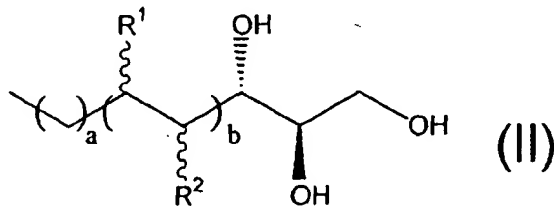
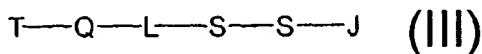
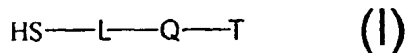
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(54) Title: SURFACE MODIFYING COMPOSITION



(57) Abstract: Alkanethiols of formula (1) and the enantiomers of the alkanethiol of formula (1), and disulfides of formula (3) and the enantiomers of the disulfide of formula (3), where -T is a moiety of formula (2) R¹ and R² are each individually selected from the group consisting of H and OH; a is 0 to 3; b is 0 to 3; and indicates that the chirality of the carbon atom to which it is attached is either R or S; may form inert surfaces that prevent the unwanted adsorption of proteins and cells.



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INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 01/32126

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C07C323/12 B05D1/18

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07C B05D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

BEILSTEIN Data, WPI Data, EPO-Internal, PAJ, MEDLINE, BIOSIS, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	R.G. CHAPMAN, ET AL.: "Surveying for surfaces that resist the adsorption of proteins" JOURNAL OF THE AMERICAN CHEMICAL SOCIETY, vol. 122, no. 34, 12 August 2000 (2000-08-12), pages 8303-8304, XP002201702 American Chemical Society, Washington, DC, US ISSN: 0002-7863 table 1, entry 2 --- -/--	1,19,29, 30,36,41

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
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- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	Y.-Y. LUK, ET AL.: "Self-assembled monolayers of alkanethiolates presenting mannitol groups are inert to protein adsorption and cell attachment" LANGMUIR, vol. 16, no. 24, 28 November 2000 (2000-11-28), pages 9604-9608, XP002201703 American Chemical Society, Washington, DC, US ISSN: 0743-7463 compounds 1a,1b	1-8,19, 22-36, 41-44
X	DE 36 30 184 A (KAO) 12 March 1987 (1987-03-12) compounds I,V	1,9
X	PATENT ABSTRACTS OF JAPAN vol. 018, no. 542 (C-1261), 17 October 1994 (1994-10-17) & JP 06 192058 A (KAO), 12 July 1994 (1994-07-12) abstract	1

INTERNATIONAL SEARCH REPORT

International Application No.

PCT/US 01/32126

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
DE 3630184	A	12-03-1987	JP 62061965 A	18-03-1987
			DE 3630184 A1	12-03-1987
			FR 2587030 A1	13-03-1987
<hr/>				
JP 06192058	A	12-07-1994	NONE	
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